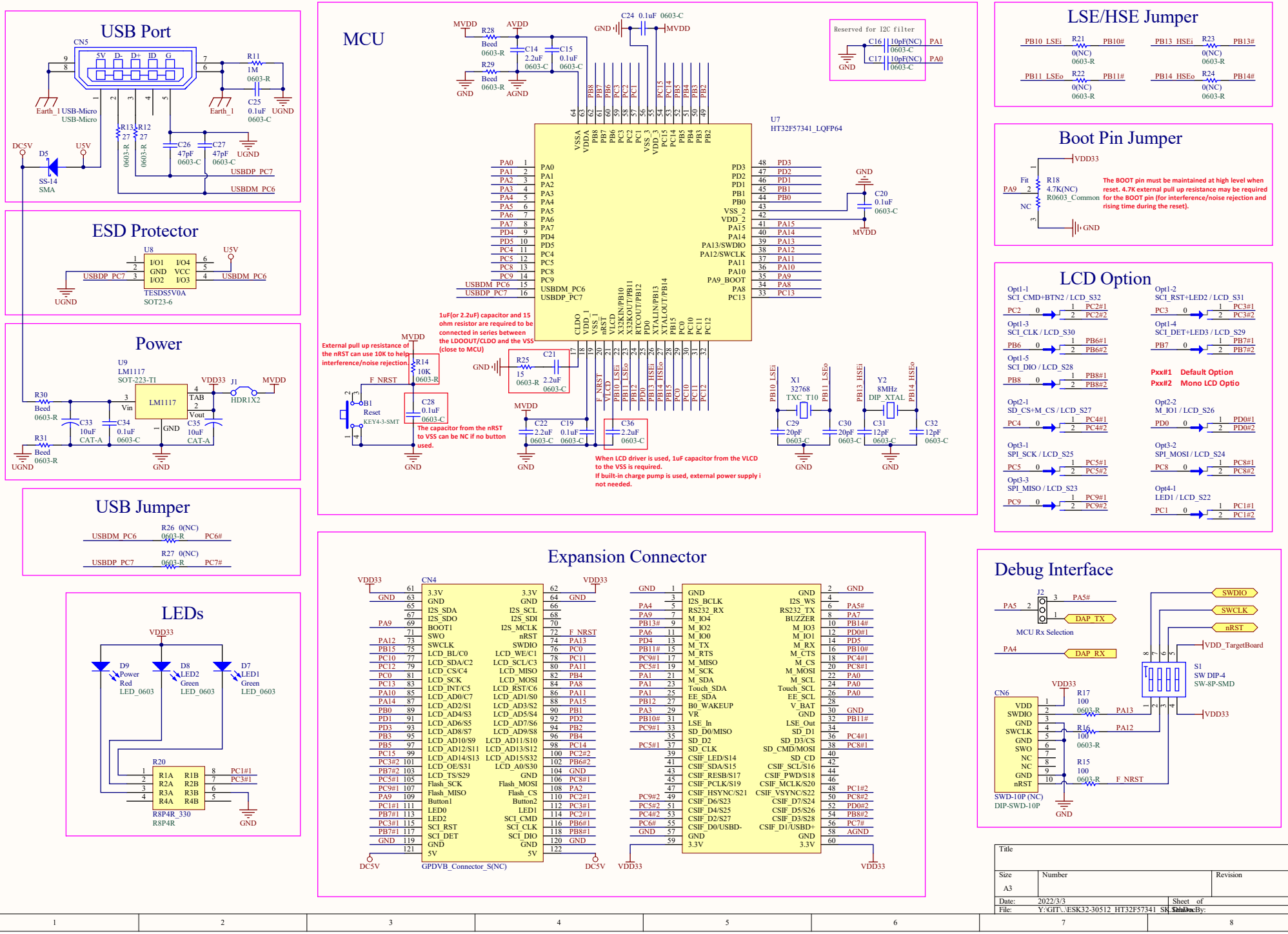
USB Port
CN5
5V D- D+ ID G
Earth_1 USB-Micro
USB-Micro
R11 1M 0603-R
C25 0.1uF 0603-C
UGND
R13 27 0603-R
R12 27 0603-R
C26 47pF 0603-C
C27 47pF 0603-C
DC5V
D5
U5V
SS-14 SMA
USBDP_PC7
USBDM_PC6
ESD Protector
U8
I/O1 I/O4 GND VCC I/O2 I/O3
TESDS5V0A SOT23-6
Power
U9 LM1117 SOT-223-TI
LM1117
VDD33
J1 HDR1X2
MVDD
R30 Beed 0603-R
C33 10uF CAT-A
C34 0.1uF 0603-C
C35 10uF CAT-A
R31 Beed 0603-R
Vin
Vout
TAB
GND
USB Jumper
R26 0(NC) 0603-R
R27 0(NC) 0603-R
USBDM_PC6
USBDP_PC7
PC6#
PC7#
LEDs
D9 Power Red LED_0603
D8 LED2 Green LED_0603
D7 LED1 Green LED_0603
R20
R1A R1B R2A R2B R3A R3B R4A R4B
R8P4R_330
R8P4R
PC1#1
PC3#1
MCU
AVDD
R28 Beed 0603-R
R29 Beed 0603-R
AGND
C14 2.2uF 0603-C
C15 0.1uF 0603-C
C24 0.1uF 0603-C
U7
HT32F57341_LQFP64
VSSA VDDA PB8 PB7 PB6 PB5 PB4 PB3 PB2 PC15 PC14 PC13 PC2 PC1 VSS_3 VDD_3
PA0 PA1 PA2 PA3 PA4 PA5 PA6 PA7 PD4 PD5 PC4 PC5 PC8 PC9 USBDM_PC6 USBDP_PC7
PD3 PD2 PD1 PB1 PB0 VSS_2 VDD_2 PA15 PA14 PA13/SWDIO PA12/SWCLK PA11 PA10 PA9_BOOT PA8 PC13
CLDO VDD_1 VSS_1 nRST VLCD X32KIN/PB10 X32KOUT/PB11 RTCOUT/PB12 PD0 XTALIN/PB13 XTALOUT/PB14 PB15 PC0 PC10 PC11 PC12
Reserved for I2C filter
C16 10pF(NC) 0603-C
C17 10pF(NC) 0603-C
PA1
PA0
C20 0.1uF 0603-C
1uF(or 2.2uF) capacitor and 15 ohm resistor are required to be connected in series between the LDOOUT/CLDO and the VSS (close to MCU)
External pull up resistance of the nRST can use 10K to help interference/noise rejection.
R14 10K 0603-R
F_NRST
B1 Reset KEY4-3-SMT
C28 0.1uF 0603-C
The capacitor from the nRST to VSS can be NC if no button used.
R25 15 0603-R
C21 2.2uF 0603-C
C22 2.2uF 0603-C
C19 0.1uF 0603-C
C36 2.2uF 0603-C
When LCD driver is used, 1uF capacitor from the VLCD to the VSS is required.
If built-in charge pump is used, external power supply i not needed.
X1 32768 TXC T10
C29 20pF 0603-C
C30 20pF 0603-C
Y2 8MHz DIP_XTAL
C31 12pF 0603-C
C32 12pF 0603-C
PB10_LSEi
PB11_LSEo
PB13_HSEi
PB14_HSEo
Expansion Connector
CN4
3.3V GND I2S_SDA I2S_SDO BOOT1 SWO SWCLK LCD_BL/C0 LCD_SDA/C2 LCD_CS/C4 LCD_SCK LCD_INT/C5 LCD_AD0/C7 LCD_AD2/S1 LCD_AD4/S3 LCD_AD6/S5 LCD_AD8/S7 LCD_AD10/S9 LCD_AD12/S11 LCD_AD14/S13 LCD_OE/S31 LCD_TS/S29 Flash_SCK Flash_MISO Button1 LED0 LED2 SCL_RST SCL_DET GND 5V
I2S_SCL I2S_SDI I2S_MCLK nRST SWDIO LCD_WE/C1 LCD_SCL/C3 LCD_MISO LCD_MOSI LCD_RST/C6 LCD_AD1/S0 LCD_AD3/S2 LCD_AD5/S4 LCD_AD7/S6 LCD_AD9/S8 LCD_AD11/S10 LCD_AD13/S12 LCD_AD15/S32 LCD_A0/S30 GND Flash_MOSI Flash_CS Button2 LED1 SCI_CMD SCI_CLK SCI_DIO GND 5V
GPDVB_Connector_S(NC)
GND I2S_BCLK RS232_RX M_IO4 M_IO2 M_IO0 M_TX M_RTS M_MISO M_SCK M_SDA Touch_SDA EE_SDA B0_WAKEUP VR LSE_In SD_D0/MISO SD_D2 SD_CLK CSIF_LED/S14 CSIF_SDA/S15 CSIF_RESB/S17 CSIF_PCLK/S19 CSIF_HSYNC/S21 CSIF_D6/S23 CSIF_D4/S25 CSIF_D2/S27 CSIF_D0/USBD- GND 3.3V
GND I2S_WS RS232_TX BUZZER M_IO3 M_IO1 M_RX M_CTS M_CS M_MOSI M_SCL Touch_SCL EE_SCL V_BAT GND LSE_Out SD_D1 SD_D3/CS SD_CMD/MOSI SD_CD CSIF_SCL/S16 CSIF_PWD/S18 CSIF_MCLK/S20 CSIF_VSYNC/S22 CSIF_D7/S24 CSIF_D5/S26 CSIF_D3/S28 CSIF_D1/USBD+ GND 3.3V
LSE/HSE Jumper
PB10_LSEi R21 0(NC) 0603-R PB10#
PB11_LSEo R22 0(NC) 0603-R PB11#
PB13_HSEi R23 0(NC) 0603-R PB13#
PB14_HSEo R24 0(NC) 0603-R PB14#
Boot Pin Jumper
VDD33
Fit
PA9
NC
R18 4.7K(NC) R0603_Common
GND
The BOOT pin must be maintained at high level when reset. 4.7K external pull up resistance may be required for the BOOT pin (for interference/noise rejection and rising time during the reset).
LCD Option
Opt1-1 SCI_CMD+BTN2 / LCD_S32
PC2 0 1 PC2#1 2 PC2#2
Opt1-2 SCI_RST+LED2 / LCD_S31
PC3 0 1 PC3#1 2 PC3#2
Opt1-3 SCI_CLK / LCD_S30
PB6 0 1 PB6#1 2 PB6#2
Opt1-4 SCI_DET+LED3 / LCD_S29
PB7 0 1 PB7#1 2 PB7#2
Opt1-5 SCI_DIO / LCD_S28
PB8 0 1 PB8#1 2 PB8#2
Pxx#1 Default Option
Pxx#2 Mono LCD Optio
Opt2-1 SD_CS+M_CS / LCD_S27
PC4 0 1 PC4#1 2 PC4#2
Opt2-2 M_IO1 / LCD_S26
PD0 0 1 PD0#1 2 PD0#2
Opt3-1 SPI_SCK / LCD_S25
PC5 0 1 PC5#1 2 PC5#2
Opt3-2 SPI_MOSI / LCD_S24
PC8 0 1 PC8#1 2 PC8#2
Opt3-3 SPI_MISO / LCD_S23
PC9 0 1 PC9#1 2 PC9#2
Opt4-1 LED1 / LCD_S22
PC1 0 1 PC1#1 2 PC1#2
Debug Interface
J2
PA5 2 3 PA5#
DAP_TX
MCU Rx Selection
PA4
DAP_RX
SWDIO
SWCLK
nRST
VDD_TargetBoard
S1 SW DIP-4 SW-8P-SMD
CN6
VDD SWDIO GND SWCLK GND SWO NC NC GND nRST
SWD-10P (NC) DIP-SWD-10P
R17 100 0603-R PA13
R16 100 0603-R PA12
R15 100 0603-R F_NRST
Title
Size A3
Number
Revision
Date: 2022/3/3
Sheet of
File: Y:\GIT\..\ESK32-30512_HT32F57341_SK\Sch\Doc
Drawn By: